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*selecting is done under which the compounds are bound to the substrate*  
b) exposing the substrate-bound receptor or the substrate-bound ligand to its <sup>corresponding</sup> partner of the <sup>non-bound</sup> receptor/ligand pair and to the agent under conditions that allow binding between the receptor and the ligand;

c) measuring an amount of binding between the receptor and the ligand by desorption spectrometry, wherein desorption spectrometry comprises desorbing and ionizing the corresponding partner of the pair from the substrate-bound receptor or from the substrate-bound ligand with an energy source and detecting the desorbed and ionized corresponding partner of the pair with a detector; and

d) determining whether the agent modulates binding by comparing the measured amount of binding between the receptor and the ligand in the presence of the agent and a control amount of binding between the receptor and the ligand without the presence of the agent,

a difference between the measured amount and the control amount indicating that the agent modulates binding between the receptor/ligand pair.

77. (New) The method of claim 76 wherein desorption spectrometry is laser desorption/ionization spectrometry.

78. (New) The method of claim 77 wherein the substrate is a probe that is removably-insertable in the mass spectrometer. *p 27. Removably insert into a desorption probe*

79. (New) The method of any of claims 76, 77 or 78 wherein the receptor is bound to the substrate.

80. (New) The method of any of claims 76, 77 or 78 wherein the ligand is bound to the substrate.

81. (New) The method of any of claims 76, 77 or 78 wherein the receptor is a cell surface receptor.

82. (New) The method of any of claims 76, 77 or 78 wherein the receptor is an intracellular receptor.

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83. (New) The method of any of claims 76, 77 or 78 wherein the receptor is a hormone receptor.

84. (New) The method of claim 79 wherein the receptor is comprised within a cell membrane.

85. (New) The method of any of claims 76, 77 or 78 wherein the substrate-bound receptor or the substrate-bound ligand is bound to the substrate through a linker.

86. (New) The method of any of claims 76, 77 or 78 wherein the substrate-bound receptor or the substrate-bound ligand is bound to the substrate through an antibody.

87. (New) The method of any of claims 76, 77 or 78 wherein the substrate-bound receptor or the substrate-bound ligand is comprised within a fusion protein further comprising a detectable moiety.

88. (New) The method of claim 87 wherein the detectable moiety is an Fc fragment and the substrate-bound receptor or the substrate-bound ligand is bound to the substrate through protein A.

89. (New) The method of any of claims 76, 77 or 78 wherein the agent is a small organic molecule.

90. (New) The method of any of claims 76, 77 or 78 wherein the agent is comprised in a combinatorial library. --

REMARKSStatus of the Application

Claims 30 and 33-75 are canceled, and claims 76-90 are added. With entry of this Amendment, claims 76-90 are pending in this application.

Claims 30, 33, 67-69 and 70-75 were rejected for allegedly lacking a written description. Claims 30, 33, 67-69 and 70-75 were rejected for allegedly being indefinite. Claims 30, 33, 36, 42, 49, 54, 63, 67, 68, 70 and 74 were rejected for allegedly being